

THE PROBLEM OF PRECOCIOUS PUBERTY

Early sexual development, or precocious puberty, is a growing problem around the world; and while endocrine disruptors and oestrogen mimics are implicated, the medical profession generally regards this trend as perfectly normal.

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CHILDREN BECOMING TEENS BEFORE THEIR TIME

Julianne is a devoted mother to her beautiful and healthy-looking five-year-old daughter. But all was not as it seemed: something strange was stirring in Sarah's body. One night, while putting Sarah to bed, Julianne pulled her pyjama top over her daughter's head when Sarah suddenly exclaimed, "Ouch! That hurt when you touched my nipple." Julianne was totally surprised by her daughter's response. Upon taking a closer look, she noticed that her nipples did appear to be different from what she had remembered. In fact, they looked bigger.

Julianne immediately called her paediatrician to schedule tests. The results confirmed that Sarah was going through puberty. The small lumps were, in fact, breast buds. Sarah's breasts were actually developing. But she was only five years old! How could this possibly be?

The doctor explained that Sarah had a condition called "precocious puberty".

Julianne sat there in shock as the specialist informed her that the medical community now considers eight years of age to be the normal age for the beginning of puberty!

"While I always believed that little girls go through puberty at around eleven, twelve or thirteen years of age, something very strange was now happening to our daughters. I was now being told that little girls are considered 'normal' if they start menstruating at the delicate age of eight!"

But there is certainly nothing normal about an eight-year-old hormonally fast-forwarding into puberty.

THINKING THE UNTHINKABLE

It's hard enough trying to keep little girls as little girls these days. The teeny-bopper fascination with such sex symbols as Britney Spears has little girls trying to act much older than they are. If bearing the belly button in sexy midriff tops isn't enough to cause great consternation to parents, then the growing phenomenon of budding breasts and pubic hair certainly does. Discovering that their little girl has breast buds or pubic hair is a tragic shock to parents.

Early sexual development—precocious puberty—seems to be happening everywhere. It's a common sight these days to see nine- and ten-year-old girls with developing breasts playing in the school playground. Something is seriously amiss.

Presently, one girl out of six eight-year-olds in the USA, Australia and Britain is racing into puberty. In fact, it is a pattern emerging in young girls all over the world. Reports of early puberty have come from many diverse countries and climates including Canada, Europe, Asia and the Caribbean. This compares with one in 100 a generation ago.

Precocious puberty is a phenomenon not only occurring in girls; boys are also experiencing their version of precocious puberty. Research published in the journal *Archives of Pediatric and Adolescent Medicine* found that American boys appear to be beginning puberty earlier than in past decades. A significant number of boys as young as eight had signs of genital development some three years earlier than previous estimates.¹ In the UK, it is estimated that one in 14 eight-year-old British boys had pubic hair, in contrast to one in 150 boys of the previous generation.²

The onset of menstruation has been steadily getting earlier and earlier in Western countries. It wasn't very long ago when a teenage girl's first menstruation would arrive between the ages of fourteen and sixteen. Today, the average age of the first menstruation is under twelve years of age. For many girls, however, it is happening much earlier. In

Britain, 50 per cent of ten-year-old girls are now menstruating.

A groundbreaking study in 1997 of 17,000 girls sent shock waves through the medical community. The study found that the initial signs of puberty were occurring earlier than previously recorded. The study found that 27 per cent of African-American and almost seven per cent of Caucasian girls had the onset of secondary sexual characteristics, i.e., either breast development or pubic hair development by age seven. By the time girls turn eight years old, one in seven white girls and one out of two Afro-American girls will be starting puberty! Even more startling was the finding that one per cent of Caucasian and three per cent of African-American girls show these characteristic by three years of age!³

How common is this trend? "Young girls in the five- to ten-year-old range with breasts and pubic hair—we encounter this every day in our clinic," says Michael Feemark, chief of paediatric endocrinology at Duke University Medical Center in the USA.⁴ Similar findings were also reported from a study of 14,000 children from Bristol University's Institute of Child Health in the UK.⁵

The development of secondary sexual characteristics in girls is a significant event, signalling the onset of physiological and psychological changes of profound importance. Many scientists and doctors are very concerned. This is not only a worrying trend but a very serious public health problem. Before they have outgrown doll's houses, many young girls are being faced with the confusing mood swings, hormonal changes and sexual attention that accompany physical maturation.

The ramifications for public health are dramatic. Studies have found that girls who reach puberty earlier tend to have sex earlier, have an increased risk of pregnancy, experience more psychological stress, poor mental health, more behavioural problems, and are more likely to drink, smoke, have a lower IQ and commit suicide. For boys, it can mean more aggressive, violent behaviour, learning disabilities and more drug and alcohol abuse.

But the most disturbing consequence of early puberty in females is the well-established risk for pre- and post-menopausal breast cancer as well as ovarian cancer. According to a study published in *Nature* (1989), the risk associated with having an early menstruation—for instance, one that takes place at the age of ten—is approximately twice that associated with a menstruation occurring at the age of sixteen.⁶ In addition, girls showing early signs of puberty have increased risks of polycystic ovarian syndrome, menstrual irregularities, acne, excessive facial hair and infertility.

Early puberty in males can increase their incidence of testicular cancer, lower fertility and impaired growth leading to shorter stature. A researcher into precocious puberty, Dr Marcia Herman-Giddens, adjunct professor of maternal and child health at the University of North Carolina, said, "It's probably not healthy, since earlier studies have shown that the sooner a boy starts puberty, the higher his risk is of developing testicular cancer, just as early-maturing girls are at greater risk of developing breast cancer".⁷

THE SILENT INVASION

Since early puberty is a well-established risk for breast cancer, the earlier a woman reaches puberty, the longer her breast tissues will be exposed to potentially harmful agents (chemicals, radiation and oestrogen).⁸ Even though a girl may begin menstruating, it is unusual for her to be ovulating every month. Since ovulation is necessary for the production of progesterone, early puberty is often a condition that results in oestrogen production without the protective effects of progesterone. This hormonal imbalance adds to a girl's body-burden of oestrogen excess, putting her at increased risk of oestrogen-dependent cancers and other hormonal problems.

It has been known for some time that the younger a woman is when she starts her periods, the higher her risk of developing breast cancer later in life. The younger a woman is, the longer her overall exposure to high levels of oestrogens.

Dr Carlos Sonnenschein of the Tufts University School of Medicine warns that "...the length and amount of exposure to oestrogen is one of the most significant risk factors in breast carcinogenesis. Unless you are exposed to oestrogens, you don't get breast cancer. The longer the exposure is, the higher the incidence. Therefore, if you decrease the age of the first menstruation, you are at higher risk".⁹

The experts are confused. It is absurd to think that early puberty is the result of better nutrition, as many scientists assert. One connection is that it seems to be linked with obesity. An increase in obesity in children and lack of exercise has a direct relationship to this problem. Since the 1960s, the number of overweight kids and adolescents in the United States has nearly doubled. Today, 10 per cent of two-to five-year-olds and more than 15 per cent of children between the ages of six and nineteen are overweight.¹⁰ Childhood obesity is also a major public health concern throughout the world including in Australia, New Zealand, the UK, Ireland, Germany, Italy and Canada.¹¹

One explanation looks at a protein called leptin that encourages early breast development. Leptin is produced from fat cells and is necessary for the progression of puberty. So, the more fat cells, the more leptin is produced by the body. In addition, overweight girls have more insulin circulating in their blood. High levels of insulin stimulate the production of sex hormones such as oestrogen, adding to an oestrogen excess.

Is it just the fast foods and sedentary lifestyle that are piling up the leptin-producing fat? Perhaps not.

A 20-year study found that the greater the prenatal level of the hormone disruptor polychlorinated biphenyl (PCBs), the heavier the girls were at age fourteen and their puberty was statistically earlier.¹²

Could prenatal exposure to hormone disruptors play a role in obesity? A study based on this idea was conducted by Dr Walter Rogan, an epidemiologist at the National Institute of Environmental Health Sciences. He chose 600 pregnant women and measured the levels of chemicals in their bodies; then, when their babies were born, the researchers measured the chemicals in

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the mothers' breast milk, and finally, the children were monitored as they grew into puberty. What was found was that boys exposed to DDE and girls exposed to PCBs were heavier than their unexposed peers were. The study also found that girls with high prenatal PCB exposure tended to hit the first stages of puberty a bit earlier.¹³

In fact, the most significant guilty party is looking more and more like endocrine disruptors. Circulating around the world are thousands of these endocrine-disrupting chemicals which are now found everywhere—in our food, water and the air we breathe.

Events occurring in Puerto Rico have helped unravel this puzzling trend. For the past two decades, Puerto Rico has recorded the highest known incidence of premature breast development. It was discovered that girls as young as *two* years of age were developing breasts. Several reasons have been cited for this situation. First of all, most of these children were fed soy infant formulas. A 1997 *Lancet* study showed that soy has plant-based chemicals that mimic oestrogen, displaying a wide range of hormonal activities. The daily exposure in infants who consumed soy formulas was 6 to 11 times higher than in adults who consumed soy foods. In fact, the blood concentrations of these hormones in the children were 13,000 to 22,000 times higher than oestrogen levels normally found in the blood!¹⁴

Clues have also emerged, implicating endocrine disruptors. In a significant study, the early breast development of the Puerto Rican children was linked to exposure to phthalates, a ubiquitous chemical plasticiser. The researchers measured the presence of certain phthalates in the blood of 41 girls experiencing early breast development and made comparisons with a control group. The average age was 31 months. They found that 68 per cent of the precocious puberty girls had high levels of phthalates in their blood.¹⁵

Phthalates have infiltrated our world. They are in common industrial chemicals that make plastics flexible without sacrificing strength or durability. They are found in building materials, food packaging and food wrap, toys and other children's products, medical devices, garden hoses, shoe soles, automobile undercoating, wires and cables, carpet backing, carpet tiles, vinyl tiles, swimming pool liners, artificial leather, canvas tarpaulins, notebook covers, tool handles, dishwasher baskets, flea collars, insect repellents, skin emollients, hairsprays, nail polish and perfumes.

John Peterson "Pete" Myers, co-author of *Our Stolen Future*, agrees. "Contamination in the womb can speed or retard sexual development," Myers said. "These compounds interfere with hormones that control the pace and pattern of development."¹⁶

Chemicals that are suspected of having effects on sexual development include bisphenol-A and polybrominated biphenyls, chemicals found in plastic, and phthalates, which are found in cosmetics.¹⁷

Hormone disruptors, like silent saboteurs, have invaded the highly sensitive endocrine systems of our children. Whether from toxins in the environment, or hormone-laden meat and dairy products or chemical-laced foods and household products, exposure to dangerous chemicals has reached a level unprecedented in the entire history of human civilisation. Is there any wonder why precocious puberty is a worldwide phenomenon?

The fact that early puberty is a known risk factor for breast cancer should be of great concern to all parents, and all possible precautions must be taken to safeguard children from unnecessary exposure. No one really knows the long-term consequences of early sexual development. This is an unprecedented experiment on our children.

Hardly a minute goes by without our being exposed to some chemical. It may be from car exhaust, room freshener, artificial fragrances, a McDonald's hamburger and Coke, baby shampoo, dry cleaning, coloured popcorn, furniture polish, the fire retardant on new school clothes, plastic water bottles, dry cleaning, fly spray, and on and on it goes. Beginning *in utero*, our children are accumulating chemicals in their bodies little by little, day in and day out, for years and years. For some children, the effects may become evident quickly; for others, it may take many years or decades before the real harm—the cancers, the multiple sensitivities, the behavioural problems, the learning disabilities and the infertility—becomes apparent.

HORMONES IN THE FOOD SUPPLY

Commercial beef and pasteurised dairy products consistently have the highest levels of persistent hormone disruptors. As of 1995, the US Food and Drug Administration allowed the use of implanted hormonal agents for raising beef cattle. These include the female hormones oestradiol and progesterone, the synthetic progesterone norgestomet, the male hormone testosterone and the synthetic anabolic steroids trenbolone and Zeranol. Growth agents that do not have to be implanted include a progestin that can be added to the animals' feed. Animals given these hormonal agents are not required to go through a withdrawal period prior to slaughter. Indeed, the FDA does not require mandatory recording of medication or treatment of animals

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destined for our plates.

Three natural hormones (oestradiol-17 β , testosterone and progesterone) and two synthetic substances (trenbolone and Zeranol) are also approved for use in many other countries, including Australia, Canada and New Zealand.

Hormones in beef have serious oestrogenic and carcinogenic effects—effects which the cancer establishment, the FDA and the cattle industry have been well aware of for decades. Yet the real dangers they pose, especially when it comes to women and breast cancer, have remained in the shadows until only recently.¹⁸ (Non-organic meats like pork, veal, lamb and poultry, although uncontaminated by sex hormones, contain pesticides and a wide range of veterinary drugs.)

Not surprisingly, a random survey in 1986 found that up to half of all cattle sampled in feedlots in Kansas, Colorado, Texas, Nebraska and Oklahoma had hormone pellets illegally implanted in muscle tissue rather than under the ear. This practice led to higher absorption of hormones from the implants and very much higher residues that even the FDA admitted could have "adverse effects".¹⁹

According to Dr Samuel Epstein, Professor of Occupational and Environmental Medicine at the University of Illinois School of Public Health: "Records of hormone levels in beef, obtained under the Federal Freedom of Information Act from the FDA, show that even when ranchers implant single hormone pellets

beneath the ear skin under ideal laboratory conditions, levels of oestradiol and other hormones in meat and organs are more than triple the levels found in non-implanted controls. Much higher levels, up to three-hundred-fold, result from the common practice of illegal intramuscular implants...²⁰

Cattle today are receiving a lot more hormones than ever before. In 1990, the FDA ruled in favour of doubling the dose of hormones allowed in cattle. As a result of this new ruling, some feedlots now put implants in each ear for more bulk at a faster rate. This is because feedlots are paid by weight for their product.²¹

The FDA's reports in hormonal implants give us cause to worry. In 1983, the FDA found that Synovex-S, a product containing oestradiol and progesterin, increased oestradiol concentrations in cattle muscle by twelvefold, in liver by sixfold, in kidneys by ninefold and in fat by twenty-three-fold. When cattle are slaughtered following implantation, levels are even higher. With multiple implants, they are higher still; with intramuscular implants, yet even higher. Some hormones are fed to cattle in feedlots.²²

The extent to which hormonal meat contributes to increased rates of breast cancer, apart from cancer of the uterus, prostate and testes, has been virtually ignored. Hormonal beef may also have another endocrine-disruptive side effect: early puberty.

It comes as no surprise that the European Union has banned the importation of hormone-treated US beef. Americans, unfortunately, are getting a pharmacopoeia of steroid drugs every time they chow down a hamburger or hot dog. For children, eating hormone-laced meat on a regular basis seriously increases their oestrogen exposure.

It should be obvious by now that organically raised meat is the only safe meat to eat. Free of chemicals, sprayed feed, antibiotics and hormone-injected growth stimulators, *organic, grass-fed* beef is by far healthier and more nutritious than the commercial kind.

What about poultry and fish? With the use of growth promoters and antibiotics in the poultry industry, *organic* chickens and turkeys are, without doubt, the safer option.

Fish has always been considered a healthy alternative to meat. Unfortunately, it is getting harder and harder to find clean fish, either freshwater or ocean. Freshwater fish appear to be among the most heavily contaminated of foods. Top predator fish, like

pike and walleye, are likely to be contaminated with heavy metals like mercury—a hormone disruptor. Farmed salmon are raised on various drugs, chemicals and hormones, and shellfish often concentrate cadmium—another endocrine-disrupting heavy metal. (Diets high in adequate calcium, protein, iron and zinc help protect against cadmium absorption). The very best fish to eat are deep-sea fish such as halibut, non-farm salmon, sardines, cod and mackerel.

Free of chemicals, sprayed feed, antibiotics and hormone-injected growth stimulators, *organic, grass-fed* beef is by far healthier and more nutritious than the commercial (grain-fed) kind.

WHAT CAN BE DONE

With the red flags waving, you would think that the medical profession would be leading the charge against contamination and exposure to hormone-disrupting chemicals. After all, they are in the trenches, daily witnessing the rising number of children with precocious puberty. Surely they should be the ones jumping up and down and yelling and screaming the loudest for something to be done.

It is therefore rather shocking that a report by a nationwide network of physicians headquartered in California suggested that it is perfectly normal for Caucasian girls as young as seven and black girls as young as six to start developing breasts!²³ Perfectly normal?

Instead of facing up to the implications of what is contributing to this aberration and leading the charge for immediate investigation into the causes and solutions, the medical community prefers to ignore a looming tragedy. They have redefined what is considered normal to reflect current trends.

By claiming that nothing is wrong, no fingers are pointed, no accusations are laid and no one is held accountable. Industries and corporations can merrily continue going about their business of contaminating and polluting.

Presently, the only treatment for precocious puberty available from traditional medical doctors is the dangerous drug, Lupron. According to the *Physicians' Desk Reference*, Lupron has 265 possible risks and side-effects, including cancer. Lupron can cause severe problems such as tremors, seizures and memory loss.

The FDA has received a wide range of reports of serious side-effects, including death, suspected to be associated with the use of Lupron.

However, the agency asserts that the drug's benefits outweigh the risks, and does not believe there is sufficient proof to blame Lupron. (For more information, visit the National Lupron Victims Network at the website <http://www.lupronvictims.com/>.)

RECOVERING POLITICIAN



There are ways to help children either slow the development of precocious puberty or even possibly reverse this condition.

Holistic healing modalities such as traditional Chinese medicine (TCM), naturopathy, homoeopathy, chiropractic and other holistic medical approaches have been able to help children get their hormonal health back on track, thus reducing some of the physiological dysfunctions contributing to early development.

In addition to having a high body-burden of endocrine-disrupting chemicals, children with precocious puberty tend to have compromised digestive systems, candida from overuse of antibiotics, food allergies, nutritional deficiencies, over-burdened livers and heavy metal toxicity.

The earlier this problem is identified, the greater the success of reversing the signs of puberty. Unfortunately, orthodox medicine has no answers nor solutions and can only address the problem by prescribing powerful, toxic drugs that turn off the endocrine system.

In addition, all external sources of hormones and hormone-mimicking chemicals should be avoided. These include non-organic meat, pasteurised dairy products, sugar and refined carbohydrates, junk food, agricultural and industrial chemicals, and all commercial household cleaning products and personal care products (suntan lotion, shampoos, bubble baths, moisturisers, etc.). Our bodies, our homes, our gardens and our schools should be made chemical-free zones.

Precocious puberty is a perilous experiment of 21st-century living, making children teens before their time. However, with vigilance, education and the commitment to making healthy changes, our children's endocrine well-being and their future health can be ensured.

GUIDELINES FOR REDUCING EXPOSURE TO OESTROGEN DISRUPTORS

1. Eliminate any pesticide, herbicide and insecticide use on lawns and gardens. Even some commercial composts may be contaminated with chemicals. Effective organic products are available, or learn to make your own pest control formulas. Make your own organic compost.

2. Lobby in your community to stop the spraying of hormone-disrupting chemicals in and around schools and city properties.

3. Make as much of your diet organic as possible. This will eliminate the toxic, hormone-disrupting chemicals that are sprayed on fruits and vegetables. Also, buy organic meat, poultry, dairy foods and butter that are free of steroid hormones and antibiotics. Organic foods have been found to contain higher amounts of vitamins and minerals.²⁴ Be aware that the following commercially grown fruits and vegetables have been found by the Environmental Working Group to contain the highest levels of pesticide contamination: spinach, strawberries, apricots, cantaloupe, green beans, peaches, bell peppers, celery, cucumbers, cherries and grapes.

Glutamine-rich foods help the liver remove environmental waste and give protection against pollution: broccoli, cauliflower and other cruciferous vegetables, asparagus, spinach, watermelon,

pears, squash and potatoes. Allylsulphide-containing foods like garlic, shallots, onions and chives stimulate glutathione production. Miso, fermented soybean paste and seaweed remove pollution and radiation from the body.

4. Thoroughly wash non-organic fruits and vegetables with either a fruit and vegetable wash available at health food stores, or soak them in an apple cider vinegar and water bath.

A Clorox bath is most effective and inexpensive for removing bacteria, parasites, pesticides and other contaminants from food. Add a teaspoon of Clorox to one gallon (3.785 litres) of water. Soak leafy vegetables and thin-skinned fruit (berries, plums, peaches, etc.) for 15 minutes; root, thick-skinned or fibrous vegetables and thick-skinned fruits (oranges, bananas, apples) and poultry, fish and eggs for 20 minutes.

Frozen meats (not ground meat) can be thawed in a Clorox bath for about 20 minutes for up to five pounds (2.267 kilograms) of frozen meat. Remove the foods from the Clorox bath, place them in clear water for 10 minutes, and rinse. Dry all foods thoroughly and store. Warning: use only Clorox, and no other brand of bleach, since it does not contain any chlorine.

5. Use organic personal care products. Most deodorants, shampoos, sunscreens, skin care, body care and baby products contain carcinogenic or toxic chemicals. According to a US General Accounting Office Report: "Cosmetics are being marketed in the United States which may pose a serious hazard to the public. Over 2,983 chemicals used in cosmetics...and one-third (884) of these ingredients have been reported as toxic substances..."

6. Don't let children chew on soft plastic toys. Phthalates are added to soften PVC plastic toys. These plastic toys also retain any pesticides sprayed in the house for up to two weeks. Buy

unfinished wood or natural fibre toys.

7. Avoid lice and scabies shampoos containing lindane and synthetic pyrethroid. Lindane has been shown to promote tumour growth the same way oestrogen did.

8. Teach your children to wash their hands frequently and not to lick their fingers or bite their nails. Since chemicals inevitably get deposited on surfaces, frequent cleaning with organic cleaning products is a safe, preventive measure.

9. Whenever possible, avoid buying canned foods or foods wrapped in plastic. Make sure you remove foods from packaging as soon as possible. Use glassware for oven cooking. (Note that using microwave ovens is not advised; however, if you must use one, make sure you use only glass cookware.)

10. Carefully read the labels of foods, personal care products, household cleaners, cosmetics, lawn and garden supplies and pet supplies. Become familiar with the dangerous chemicals found in such products and be willing to buy other, safe brands.

11. Install a water filter. Pesticides, other chemicals, rotting leaves and other debris combine in drinking water. Heavy metals from household pipes and plumbing can be an added concern.

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12. Use plants for filtering chemicals from the air in your home. Even chemicals emitted from new carpets or curtains can be filtered by common household plants. For instance, Boston ferns can detoxify 1,000 micrograms of formaldehyde from the air in one hour.²⁵

13. Get exercise. Sweating eliminates all kinds of chemicals that would otherwise be eliminated through the body's other excretory organs (the kidneys and bowel).

14. Avoid pet products such as flea collars and washes which contain toxic substances which are dangerous to animals but also get transferred to pet owners.

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